

### Abstract

The various designs of capacitive or inductive coupling/decoupling fitted on cables in a medium voltage network are known, the inductive coupling circuits constantly inducing current in the sheath of the electric cable. The invention aims at obtaining ranges of capacitive coupling/decoupling for an inductive coupling circuit. Therefore, an inductive coupling unit comprising a ring enclosing the sheathed electric cable and a coil, coupled to said ring by induction and connected to a transmission and reception device, is designed such that, upon transmission the current of the message signal is directly induced in the conductor and, upon reception, only the conductor current is evaluated. In a first embodiment, a by-pass, located downstream of the inductive coupling unit and upstream of the defined surface, is connected to the sheath and to ground or to the compensation potential. In a second embodiment, a by-pass connected to the sheath and to the ground or to the compensating potential has a conduction path passing back through the ring core. The invention concerns telecommunication systems in current distribution electrical networks.